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Social Networking Tools for Internal Communication in Large Organizations: Benefits and Barriers

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Abstract

This article examines the prospect of implementing Social Networking technology and practices within large organizations, for internal communication among staff. A review of the literature revealed a very high rate of adoption among recreational users of tools such as Facebook, in comparison to the corresponding rate in businesses. A qualitative study was undertaken to explore the benefits and barriers of Social Networking tools in organizations. The analysis indicated that many respondents did foresee possible benefits, with some envisaging a longer term opportunity for these tools to engender a business climate of trust and enhance collaboration among business functions. However, most respondents also anticipated substantial barriers and risks, arising primarily from the existing internal communication policies within the organization studied. This research aims to extend understanding of some of the non-trivial social and organizational factors potentially involved in the interaction among people within a firm through a Social Networking application.

Keywords:

Social Networking applications, Large organizations, Web 2.0, Collaboration technology, Organizational communication.

INTRODUCTION

The Context

In recent years there has been exponential growth in use of Social Networking (SN) tools such as Facebook and MySpace primarily for personal purposes, yet the adoption of such tools in business has been much more modest. The impact of this global social phenomenon on business may be considerable. Morgan (2006) posits that the changes within society ultimately cascade across organizational environments resulting in the requirement for organizations to change to remain competitive. In turn, the prospective adoption and use of SN tools in an organizational context may impact upon the behaviour and relationships between staff.

In an initial empirical study on this topic the authors undertook qualitative research underpinned by a constructivist paradigm. The principle focus is an emerging and relatively unexplored area, namely the socio-cultural and organizational factors affecting the interaction of employees with SN information systems in a business context. The study initially considers the literature on the adoption of SN applications for recreational purposes and the experience of companies implementing such applications for communication among their employees. It then reports upon a preliminary study conducted within the Singapore and Melbourne branches of an international organization that has actively discouraged the use of SN applications. A number of interviews conducted with staff of both business units sought to capture the range of perspectives on the potential benefits, opportunities, barriers and risks that would arise from the implementation of a SN application. These are reflected upon. Subsequently, the findings from interviews with staff are considered against the themes emerging in the literature, with particular focus on the benefits of adopting SN tools in a business context and some of the barriers to this adoption.

LITERATURE REVIEW

SN is the particular focus of this paper. In general terms, this denotes the interaction of individuals together in groups. The availability of and accessibility to the Web 2.0 and virtual collaboration technologies has facilitated online SN and the subsequent emergence of virtual communities. Within such systems that facilitate the reciprocal exchange of information (Edwards 2004), users can store resources such as photographs and add labels, or 'tags', to describe each stored resource (Klobas 2006). Group formation, informal relationships and community building are also integral aspects of online SN. The term 'Web 2.0' alludes to the evolution of the earlier, more static Internet into a dynamic portal for mass collaboration which empowers users to develop, rate and distribute Internet content, thus expressing themselves through user created content (OECD 2007). Web 2.0

encompasses technologies such as Weblogs, Wikis, online SN and three-dimensional Virtual Worlds. The implementation of Web 2.0 tools in large organizations has sometimes been referred to as 'Enterprise 2.0'. Authors such as Menzel (2007), Newman and Thomas (2008) and Cook and Tapscott (2008) have utilized this term and explored its implications on businesses.

Recreational Usage of SN Software

SN sites have experienced tremendous growth among leisure users. Among the more prominent tools are MySpace and Facebook. The former had 100 million members worldwide as of August 2006, with an adoption rate of half a million people a week. The latter had 31 million members by May 2007, when it adopted a different business model, opening up its platform to independent application developers. This enabled it to sustain its impressive growth, underpinning its enormous global popularity (Tynan 2007). The authors' note that a variety of SN sites exist apart from those discussed within this study, however for the purposes of this document MySpace, Facebook and to a lesser extent LinkedIn will feature as the principle SN technologies discussed.

The demographics of the users of some of these SN applications are also somewhat surprising. A recent OECD (2007) report refers to the younger age groups as 'digital natives'; they are characterized by substantial IT skills, a willingness to engage online and a lower hesitance towards revealing personal information on the internet. Such attributes were generally associated with greater adoption rates of social software. Conversely in the case of the more popular SN sites, the users generally come from more diverse age groups. For instance, users between the ages of 35 to 54 accounted for as high a proportion as 40.6 percent of the MySpace user base (Lipsman 2006). Similarly in 2007, many of Facebook's new members were over 30 and professionals (McGillicudy 2007).

Although the user base and product features of SN tools vary, what appear to be constant are the factors that lead individuals to allocate substantial leisure time to their usage. Research by Evans (2007) identifies, among others, two important characteristics of the Web 2.0 "revolution". One of these is the fact that individuals can 'own' a space on the Web, hence moving from being consumers to becoming contributors and collaborators. The other is personalization, including the ability to not only customize the interface of a website but also 'construct' the way in which information is represented. Each of these, Evans (2007) asserts, leads to user empowerment.

Business Adoption and Usage of SN Software

SN was widely regarded as a recreational tool until Facebook moved to facilitate professional networking, eventually offering over 300 business applications (Evans-Correia 2007). In addition, LinkedIn emerged as an online networking site with an exclusively professional focus (Valdes 2007) and predominantly a subscription service (Rosenbush 2006). By December 2007, the site had attracted almost 17 million users, and was growing at 1 million users per month (Valdes 2007). The demarcation between professional and recreational online SN would blur further. On 10 December 2007, Facebook announced a component model enabling third-party developers to build modules or widgets that integrate into the LinkedIn user experience (Valdes 2007). Facebook applications have been developed that enable viewing and sharing of LinkedIn contacts (Evans-Correia 2007). Forrester corroborated that the Web 2.0 market was a growing force in enterprise software in 2007 (Sayer 2007). In the meantime, over three-fourths of executives who responded to one survey said they planned to maintain or increase their investments in technology trends that encourage user collaboration (McKinsey Quarterly 2007b).

The Wachovia Bank implemented a SN service for its 110,000 employees in early 2008. This facilitated staff uploading photos and personal information to communicate with their colleagues. Community building was the immediate objective, while the company ultimately envisages a Knowledge Management platform also incorporating other Web 2.0 tools such as Wikis and Blogs (Cone 2007). A more incremental approach was adopted by Deloitte Touche Tohmatsu, which had initially undertaken SN to allow former employees to keep in touch with each other and the firm. Following its unanticipated success, it subsequently proceeded to add Facebook-style environments for its employees. This was perceived as a breath of fresh air in relation to more rule-based Knowledge Management tools, which met with user reluctance (Cone 2007).

SN has the potential to enhance communication tools and channels in firms. Poor communications practices are a common shortcoming in business, exacerbated by inadequate technologies, according to a study commissioned by Cisco (Murray 2006). Despite the non-trivial growth of SN applications in enterprises, its adoption is clearly disproportionate to the spectacular exponential growth of similar technologies in recreational contexts. The discrepancy between recreational and organisational uptake may be attributable to the prohibition of online SN sites in some work environments. A 2007 study of 200 companies by Info-Tech Research Group Inc. in London, Ontario, found that 46 percent of these firms explicitly block access to such sites; while 49 percent tolerate employee use of such sites, and a rather small 3 percent encourage their use (McGillicudy 2007). Conversely in

a survey of approximately 700 Australian workers, almost half of those aged 16 to 34 stated they would prefer to work for an employer that allowed them to socialise on Facebook and MySpace, over one that did not. Moreover, 75 percent of respondents in the same survey believed SN would also benefit their company (Timson 2008). In the view of LinkedIn co-founder Konstantin Guericke, the opportunity for online networking in business is ultimately larger than recreational use (Rosenbush 2006).

Potential Opportunities and Benefits of SN Software at Work

Early advocates of collaboration software identified tangible benefits. Bellman (2000) for example, discovered that organizations he surveyed had reduced their phone and email usage by 81 percent and 67 percent respectively, by introducing Instant Messaging software for use by employees. In most cases, however, the opportunities and advantages of such software lie in the intangible realm. This is illustrated by TIME magazine, in 2006, assigning its prestigious 'person of the year' award to 'You'; referring to the individuals participating in mass collaboration (Grossman 2006). From an organisational perspective, however, while enhanced productivity and innovation can be immensely beneficial, they cannot usually be measured in a straightforward manner. Moreover, even if increased productivity and innovation are accomplished following the adoption of an online SN tool, it is often not viable to incontrovertibly attribute these benefits to the adoption of this tool.

SN tools may offer a means for employees to cope with the increasing fragmentation of modern society. Brocklehurst discusses sociologist Richard Sennett's depiction of fragmentation as 'corrosive of character' and the temporal and spatial changes individuals undergo in the contemporary paradigm. He considers the means by which identity is constructed and poses the problem that new forms of work make it "…inevitable that commitment to others becomes more precarious and that personal identity becomes increasingly rootless and harder to sustain…" (Brocklehurst 2001). The authors' propose the possibility that SN offers individuals the option to maintain relationships through a consistent identity with colleagues regardless of space or time. Furthermore, the expectation for staff to increasingly commit to work at home and out of hours can mean that their work may define the limits of their SN, to varying extents.

Castells (2000) describes collaboration as being built upon networks as dynamic and open systems. Effective collaboration depends on the relationships between participants. (Hardy et al. 2005). A set of actors and the relationships existing between them is defined as a social network (Wasserman et al. 1994). The co-founder of LinkedIn largely converges with these views in perceiving that people tend to make business decisions by drawing on personal networks (Guericke cited in Rosenbush 2006). The collaborative paradigm contends that an organization can realize benefits at the strategic level through inter-employee social bonds. Booch and Brown (2002) define a Web Community as 'a collection of individuals with a shared interest and a shared identity'. Feeley and Barnett (1997) link highly connected staff to increased commitment and a self-perception of being influential. Meanwhile, Krackhardt and Stern (1988) found that friendship ties across groups provided coordination in responding to crises. Similarly according to a McKinsey study, workers who interact with others were able to draw on their experiences and judgment to solve problems (McKinsey Quarterly 2007a). The 'Medici effect' mirrors this view with a focus on interdisciplinary thinking. Where two disciplines intersect, an 'idea space' is created. Breakthrough ideas and concepts from one field can engineer new ideas and innovation in another (Johansson 2006). SN may enable the creation of more of these intersections.

Evidence suggests that collaboration is not simply a means of developing a competitive advantage, but an actual business imperative. Organizational structures whereby critical decisions occur within silos can reduce strategic flexibility (Nutt 2004). SN offer a means of cutting across these silos, by encouraging communication based on interests outside of strictly professional, outcome based motives. Research suggests that social capital can be enhanced through connections that cross organizational boundaries (Brass et al. 2004). Stuckey and Arkell (cited in Evans 2007) argue that virtual collaboration tools of a social nature can aid the development of a knowledge sharing organizational culture. Compliance has inherently driven knowledge management to-date. There is a need for both cultures to co-exist and to be balanced, they argue, as "sustainable knowledge management lies in the marriage of the two" (Stuckey and Arkell cited in Evans 2007). This reflects the perspective of Nonaka and Takeuchi (1996) who advocate a combination of hierarchical efficiency and the flexibility of networked teams.

In leveraging the social relationships existing within a firm to reap immediate and potentially strategic benefits, the technological tool utilized is only part of the equation. Ray Ozzie, industry pioneer in computer-supported cooperative work, offers a more holistic perspective. "Truly effective collaboration", he reminds us, "lives at the intersection of technology, organizational dynamics, and social dynamics". He concludes that it is imperative for virtual collaboration solutions to demonstrate tangible business benefits: such as reducing the amount of time that it takes in a specific design process, or doing customer support more efficiently (Ozzie cited in Austin 2004). Hence, there can be no silver bullets, but rather a technology (or a combination of integrated technologies, as has been the case in several firms using online SN) condoned and encouraged by a sufficiently permissive and open organizational culture. This then requires enthusiastic, active and prudent utilization by a significant proportion of employees. Lurey and Raisinghani (2001) emphasise that relevant 'organizational

support systems' need to be in place. They stress the need for education and reward systems for staff, an open and inquisitive senior leadership style in the organization, appropriate team communication patterns and the technology itself. Tabrizi (2007) extends this description to include another success factor, namely the planning framework in an organization. This needs to focus on the value of information. The information is the resource providing value to the organization, not the information technology (IT) system which is simply a means of delivery (Tabrizi 2007).

Despite the relatively slow business adoption of SN tools in recent years (for purposes of internal communication) numerous sources envisage a more promising future. Burton Group analyst Mike Gotta expects SN to be a proven contributor to corporate revenue growth, profitability and innovation within five years (Cone 2007). Such benefits may emerge, predicts Linda Goodspeed, with "the progression of the younger generation into more prominent business positions". (Goodspeed cited in CIO.com Staff December 2007).

Barriers to Adoption and Risks Arising from SN Software at Work

Immediate Barriers and Risks

The issue of information security is particularly significant, as indicated in an OECD (2007) study of user created content. Ray Ozzie provides insight on the prevailing attitude. "Corporate IT doesn't want anything on their network until they know that it's safe and secure, no matter what its benefits" (Ozzie cited in Austin 2004) This mentality is justified if one considers that several perilous worms, viruses and Trojans have targeted SN sites, particularly MySpace (McGillicudy 2007). Hackers have succeeded in manipulating user profiles and stealing user login information; as many users tend to maintain login information for their SN sites that is identical to the login information they use for their corporate network access (McGillicudy 2007). Such dangers render the implementation of such a tool within, rather than outside, the corporate firewall almost invariably necessary.

From a technical perspective, SN sites can place considerable strain on network bandwidth. As they often display content from various sources on the Internet, more Domain Name System (DNS) requests are required from corporate servers. The typical news site with an advertisement might call for about 15 DNS requests, while a MySpace page can call for 350 or more (McGillicudy 2007). Both security and bandwidth have been identified as concerns in research conducted on another SN application used by organizations, namely Second Life (Taylor et al. 2008b). Therefore the specific approach and utility of a SN site within an organizational context can be limited by both security and available infrastructure, or a lack of corporate desire to invest in these areas.

Underlying Barriers and Risks

The less immediate and tangible but more challenging barriers and risks in the implementation of SN for business may lie in conflicting underlying organizational philosophies. The classical perspective of IT usage, built upon the resource-based view of the firm (Porter 1980) is one such philosophy which may impede the successful adoption of such emerging and 'non-classical' technologies. The conventional view of work and communication is based on the division of labour and an inference that humans tend to defer work for other forms of enjoyment (Florida 2004). This paradigm extends into the use of IT in organizations through a neo-taylorist paradigm.

IT systems and their purposes within organizations have undergone a shift, with the nature of workplace communications now allowing for individuals to participate in a team despite extended detachments (Taylor et al. 2008a). SN has contributed to this shift, with the promise of increased empowerment for employees. However, Sayer and Harvey (1997) argue that empowerment cannot be provided in conjunction with mechanistic models of control. Because power is based upon relationships between individuals, making this control indirect does not necessarily result in empowerment. Foucault has contended that methods of conditioning, surveillance and control can be just as powerful as more traditional models of power (Foucault 1977). True empowerment, possibly the essence of recreational SN, is not likely to be feasible under such circumstances. Control and power are central to considering SN and the benefits available to organizations.

Moreover, there is the potential issue of clustering in the theory of SN. Clustering predicts a high occurrence of mutual acquaintances within a network. Watts (2004) states, "because (your acquaintances) know many of the same people you do and may often be exposed to similar information, they are rarely the ones who can help you leap into a new environment". Hence even if empowerment is achieved, the inability to incorporate diversity into the SN of staff, a likely consequence of individuals' tendency to associate with like-minded people, would be an inhibiting barrier to achieving some benefits associated with SN. The effect of clustering may lead to the onset of so-called 'SN fatigue'. The prognosis of some is that inevitably, people will "tire of getting yet another invitation from so-called friends to join yet another social network", although it is generally acknowledged that "social features will wind their way into all kinds of Web services, from search to news" (Business Week Staff 2008).

THE RESEARCH APPROACH

The researchers, whilst examining the various perspectives of industry and academic authors on the emergence of recreational and professional SN, also set about capturing the views of employees in a multinational organization. The focus was on the central themes covered in the Literature Review. The researchers sought to elicit the range of perspectives among people potentially using these systems to communicate with fellow employees. This involved qualitative interviews in two business units of the organization. The overarching paradigm and the associated methodology, methods and procedures deployed in the research are outlined below.

A qualitative research approach based on a constructivist (Guba et al. 1994) paradigm was adopted throughout the research, subsequent analysis and discussion. This paradigm was selected to aid in capturing the diversity, richness and complexity in respondents' perspectives on the themes relating to barriers and benefits of the use of a SN system in a business environment. As such the research philosophy and approach comprises a relativist ontology, which "assumes the existence of multiple and sometimes conflicting social realities that are the products of human intellects, but may change as their constructors become more informed and sophisticated" (Guba et al. 1994). The researchers' position on this is aligned with the view of Bouman et al (2007), that the concepts of social software are loosely defined and that it is not software as such that is social; but rather the free choice of people to engage in such activities. Hence the perceptions of the barriers and opportunities for online SN in the workplace are likely to vary among the diverse population of potential users; as well as among the same users at different periods in time. Indeed, the researchers anticipate that some of these views may be divergent or even conflicting. This variation in perceptions is also likely to exist among past, current and future researchers on the subject of online SN. In this sense the approach is similar to Rubin and Rubin's (2005) interpretive constructionist view that "people see somewhat different things, examine them through different lenses and come to somewhat different conclusions".

A transactional/subjectivist epistemology is adopted, which perceives knowledge as created and embedded in interaction between investigator and respondents. It is through a close interaction with potential users of such systems, that we can attempt to capture the diverse and sometimes divergent range of human constructions on the subject. A hermeneutical and dialectical methodology is used, with the intention being to "reconstruct previously held constructions" on the subject (Guba et al. 1994). Because SN in particular and social software in general are emerging fields the researchers have not opted for experimental/manipulative methods. The latter would entail hypotheses stated in propositional form and subjected to empirical test (Guba et al. 1994).

Methods

Qualitative Interviewing

To facilitate the chosen methodology, a Qualitative Interviewing approach has been utilized. Consistent with the constructivist paradigm, the researcher has a facilitator, rather than an authoritarian, role (Guba et al. 1994). This technique is especially effective at describing social processes and enabling the researchers to "see life in the round, from all angles", while making them more hesitant to "leap to conclusions" (Rubin et al. 2005). Hence subsequent findings and analysis will aid in exploring the various human constructions of potential users of business SN and linking these to the previously held constructions offered by the reviewed literature.

Among the family of Qualitative Interviews mentioned by Rubin and Rubin (2005), this research is more closely aligned with the Organizational Culture method. This concentrates on meanings and frameworks (such as organizational guidelines and policies which may act as barriers to online SN) as well as events and processes (such as the introduction of new communication tools in the past within the Company). At times it is narrowly focused (for instance, when interview participants are asked to elaborate on specific communication tools currently utilized); at others it adopts a broader perspective (the issue of corporate culture as a potential barrier, for example, is quite multifaceted). The research is closely concerned with the rules of organizational behaviour implicit in stories and shared metaphors; the interviewee is perceived as a "conversational partner", suggesting a congenial and cooperative experience (Rubin et al. 2005).

Responsive Interviewing

In the Qualitative Interviews performed, each having a focus on organizational culture, the practices of the researchers have been quite consistent with the Responsive Interviewing model devised by Rubin and Rubin (2005). In a manner similar to that described when outlining the epistemology of our constructivist paradigm (Guba et al. 1994) and in agreement with Holliday's (2002) views on inevitable interviewer bias, the questioning styles in this iterative model reflect the personality of the researcher. They adapt to the varying relationships between the researcher and conversational partner. As researchers, we have been cognisant of our own opinions, experiences and cultural definitions, wary of imposing these views on the respondents. Furthermore, questions have been modified and expanded in dynamic fashion during interviews, to explore the avenues created by the respondent (Rubin et al. 2005).

Procedure for Research and Analysis

One of the researchers' conducted eleven interviews onsite in Singapore over the course of two days in late January 2008. These included two Focus Groups where between two and three participants interacted with each other and with the researcher, in discussion facilitated by the researcher. The average time for each interview was approximately 36 minutes. Six interviews were conducted by one of the researchers' onsite in Melbourne in mid March 2008. The average time for each interview was approximately 43 minutes.

In order to preserve interviewee confidentiality, the ages of interviewees were not recorded. Rather, a subjective estimation of whether the respondent was 'older' or 'younger' was made by the researcher at the time of the interview. Immediately following the completion of interviews at both sites the recordings were subjected to initial analysis. This was the first of various stages of iterative analysis, in alignment with the Responsive Qualitative Interviewing model (Rubin & Rubin, 2005). Following transcription, the data obtained was systematically coded according to the main research themes, using a tabular format to allocate interviewee comments to specific themes.

THE FINDINGS

Use of SN Software Outside of Work

Facebook was ubiquitously popular as a recreational SN site among the younger users across both groups interviewed. This reflects the site's prominence in the SN landscape in recent years. A substantial proportion of users had a positive perception of the tool, pointing to the opportunities it offers for fun, social engagement and the ability to 'catch up' with friends and acquaintances across the globe in an efficient manner. These individuals may be described as 'digital natives' (OECD 2007). The ability to personalize content, a central finding of Evans' (2007) research on Web 2.0 popularity, was emphasized by various respondents as a central element of enjoyment in their recreational use of Facebook.

The majority of older interviewees were more aware of Facebook than any other SN tool. However this older group was sceptical of Facebook, even as a solely recreational facility: with low interest levels, a perceived lack of engagement and an attitude of 'this is for the younger generation' being prevalent across both geographical sites. This observed stance does little to confirm recent claims by Facebook (McGillicudy 2007) and MySpace (Lipsman 2006), of increased popularity among older generations. Furthermore, it raises concerns about the potential existence, in the company, of a generation-linked 'digital divide' (OECD 2007); between highly literate and less literate recreational users of SN software.

Meanwhile the more professional, career-oriented site LinkedIn exhibited a significantly lower recreational adoption rate and was only used by two Singapore participants. Both these individuals expressed their satisfaction with the tool. LinkedIn was predominantly unknown to Melbourne participants. This observation may relate closely to the lack of personalization of content and reduced capacity to engage socially through the LinkedIn site, resulting in reduced user interaction, in comparison to Facebook and MySpace. It may also reflect a very practical use for LinkedIn that overcomes the applications limitations, with a specific audience focused on professional networking for future employment purposes. Empirical evidence is not available to allow for further analysis of this contention.

Current Communications Practices

Throughout the interviews in Melbourne and Singapore it became unequivocally clear to the researchers that in this company at this time, face to face interaction was the perceived optimal means of communicating with colleagues. When this was not feasible, it was the conventional tools that were predominantly used: the telephone, teleconferencing and email.

Perceived Benefits and Opportunities of SN Software

Respondents had qualms about the effectiveness of current communication tools although few proceeded to explicitly state that SN could address these limitations. A number of these individuals were current users of Facebook or LinkedIn, so were certainly familiar with them. Nonetheless, various benefits were identified for SN technology. The potential to facilitate informal interactions and construct staff communities was recognized by numerous participants. One interviewee equated the use of SN software to "putting a face to a voice on the phone", while another made an analogy to the links established in sharing a casual drink with a colleague in a bar ("2 years down the line, this person may remember you"). Connotations of team unity ("The communication tool can be what unites a team", "I have a lot of people who I virtually collaborate with. Maybe it would be nice to get to know them better"), and even wide reaching trust ("It can establish trust in a business") were stated. The potential to somewhat mitigate the issue of time-zone differences in the internal business collaboration of trans-national virtual teams was also mentioned.

For a number of participants, the unity and community attainable through the appropriate use of SN tools translated to a potential (though gradual) eradication of traditional business communication barriers. Two interviewees (located in Singapore and Melbourne respectively) envisaged a future workplace where cross-cultural issues may be alleviated by leveraging relationships fostered by SN tools. One Melbourne respondent extended this optimistic belief, suggesting that SN may not only "begin to break some of the barriers between departments", but it could also lead to managers being more approachable. Two Melbourne participants articulated the view that there could be tangible benefits for the Human Resources Department. The first alluded to staff retention through better managed career progression; they speculated that "resume information is buried in the HR department" but believe "SN could help a business retain its staff by putting them into (jobs) that interest them". The second would prefer a tool resembling LinkedIn, stating "…this would be good, particularly for job availability".

An intangible "critical need" was stated by one respondent to exist for the management of the tacit, social type of knowledge embedded within the employees of the organization. It seems to be this need to facilitate better Knowledge Management which has driven several companies to implement SN tools (Cone 2007). In this respect the lack of SN tools within the organization may reflect a deficiency of business specific software which enables the capture and sharing of socially based knowledge. It may be that the means by which users most usefully share their knowledge is through their interactions rather than defined business processes. This factor has probably been overlooked in the socio-technical development of organizational software. This observation was supported by a number of participants who recognized the possibility for online SN to engender a sense of unity among teams; enabling them to "…get to know their colleagues better". Two of the stronger advocates resonated Tapscott and William's (2006) vision, with their prognosis that it could ultimately reinforce inter-employee trust in the organization; while undermining the barriers that commonly exist within hierarchical businesses. This contrasts with the organizational culture of compliance analogous to that described by Stuckey and Arkell (cited in Evans 2007).

Perceived Barriers and Risks of SN Software

Challenges were acknowledged by various participants. These did not appear to be influenced by location, age or the degree to which SN sites were utilised outside of work hours. Some interviewees were sceptical about the value of an internal business SN tool ("I couldn't see the objective"). This may reflect an underlying assumption that the software would lead staff to a 'waste time'. "I sense that lots of time could be wasted checking out friends' pages", predicts one Singapore respondent. A Melbourne colleague agreed with this view, dismissing online SN as "a huge timewaster" at work; they were quite certain that "people would spend hours staring at photos". A number of comments were indicative of a corporate culture that may not support innovative means of communication. One manager asserted that "we don't have chat here because it is a business. If you want to do private stuff go home and do it". Another acknowledged that "the grapevine operates far more efficiently" but concedes that "(informal communication) is often plagued with inaccuracy". The repercussions of this seem to range from some sense of fear ("It's really very strict… We don't communicate to each other unnecessarily", "we don't have access to go to Facebook, not even MSN… It is like a taboo… It's a culture"); to possibly frustration ("you're on a (job related) search on Yahoo and click a link (…) access denied"). One participant expressed doubts about knowledge sharing ("People don't want to share information… They take ownership of things, don't like giving it up").

There is the possibility that a significant barrier to the successful introduction of SN into organizations relates to the power relations and defensive routines inherent within their structures and processes. Whilst the age of respondents has already been discussed as a factor in attitudes towards SN, it appears that there may also be a strong association between the hierarchical position and negative perceptions of the value proposition of changing workplace communication methods. The authors' propose that this negative association could relate to the capacity for managers to perceive SN as a threat to existing power relations or a means of disrupting current work practices. Power depends on a field of influence that is often attained through the control of information. Sayer has documented a case where managers "… believed empowerment enabled through re-engineered communication threatened their position and power within the organisation" (Sayer 1998). The dichotomy between empowerment and control is significant for SN, because it offers a modern, horizontal means of communication that transcends time and space across a traditional, vertically structured organization.

The type of discourse one experiences in a recreational context can be very different to that of a workplace. In this context, the separation between recreation and workplace becomes increasingly difficult to define. Furthermore, information that staff may be willing to share with friends may be very different to the information they reveal to colleagues at work. Cultural influences may dictate the information employees are willing to share. Therefore the SN application could encourage greater trust, by breaking down communication barriers, but it may also face resistance for the same reason. It is possible that the information stored on SN sites could one day be incorporated into corporate databases in order to assist organizations making personnel management decisions (Carr 2008). Inhibition seems to reduce when communication occurs through a computer, resulting in

users divulging more information than they would face to face, with a higher potential for conflict (Davis et al. 2004). The lack of control and the potential disruption of power relations may be offset by monitoring user contributions. However increased policing of the network may contribute to user rejection of the application, based on perceptions of restrictions to freedom of expression, a significant factor given the SN reliance on user created content. The consequences of a lack of control potentially include cyber-bullying or defamation and the consequent risk of litigation for the organization.

Information security was identified as an area of concern. The existence of confidential information within the workplace led one participant to emphasise the need to "ensure (our information environment) is locked down" and another to reflect that "we are dependent on (Information) security". This reflects a risk governance culture. The requirement in regulated industries to focus upon policy, process and oversight makes implementation of SN tools, with their associated hazards and largely intangible value proposition, more difficult to justify.

The perceived barriers to online SN at work did not appear to be confined to one geographical site or age group of the company interviewed. Collectively, the interviewees appeared to express the view that the risks and barriers may outweigh the opportunities and apparently intangible benefits of these applications in a business environment. It would appear from the interviews that the implementation of SN tools within the organization would encounter substantial challenges and risks. The observation that only a small proportion of respondents articulated long-term potential benefits that could be attributed to SN tools may indicate a barrier in itself.

CONCLUSION

The majority of younger interviewees used Facebook during their leisure time and reported an empowering social experience. Conversely, many of the older respondents were far less interested in such tools, in contrast with recent media reports on the increasing age diversity among members of SN applications such as Facebook and MySpace. It is thought that this age differentiation may be a reflection of a generational gap, or alternatively, it may reflect the power relations of the organization, since the majority of older staff occupied managerial positions. Current communication technologies were generally perceived to be limited in terms of providing an engaging meeting place or an avenue for sharing knowledge. A small number of interviewees thought SN applications had the potential to address these deficiencies.

Regarding potential benefits and opportunities of such an implementation, a more informed career progression for staff and the possibility to address time-zone differences in collaboration, were identified by interviewees; though these were not covered by the literature we reviewed. On the other hand respondents did not mention the reduction of email traffic as a possible benefit, though this was mentioned in reviewed sources. In terms of the longer term, intangible benefits, we observed a degree of scepticism among most participants. Only a small proportion of these individuals echoed the highly optimistic accounts of organizational knowledge sharing envisioned, described and sometimes reported to have been experienced, by some of the sources in the literature.

A number of interviewees alluded to non-trivial technological and behavioural barriers that may impede the implementation and subsequent use of SN applications. The authors perceive that these attitudes are indicative of a less permissive organizational culture with respect to communication technology and practices. This belief is reinforced by the current policies in place at the Company. Looking beyond the specific organizational policies, the potential impact of SN tools upon traditional power relations and their reliance on the control of information and employees cannot be understated.

There are a diverse range of factors within large organizations who are contemplating the implementation of a SN tool. This study has attempted to provide a snapshot of the views among the staff in two business units of a global corporation. It has endeavoured to provide a holistic account of the attainable benefits and opportunities, while also shedding some light on the inherent challenges. Clearly there is more research to be undertaken in this area. Significantly more can be explored regarding the interaction of staff and communication through SN technology. Research is required into the behaviours SN can drive and further consideration of the factors that can encourage, or inhibit, their implementation and use in the workplace is recommended. SN applications do appear to have much to offer organizations, but this initial study indicates that their implementation will require the careful consideration of existing organizational cultures, power relations and communication practices.

REFERENCES

Austin, T. 2004. "The Gartner Fellows Interview: Founder and CEO, Groove Networks, Ray Ozzie," Retrieved 01 March 2008 from http://www.gartner.com/research/fellows/asset_115813_1176.jsp

Bellman, G. 2000. *The Beauty of the Beast.* San Francisco, CA: Berrett-Koehler Publishers.

Booch, G., and Brown, A. 2002. "Collaborative Development Environments." Rational Software Corporation.

Bouman, W., Hoogenboom, T., Jansen, R., Schoondorp, M., de Bruin, B., and Huizing, A. 2007. "The Realm of Sociality" *PrimaVera Working paper Series: Universiteit Van Amsterdam*).

Brass, D.J., Galaskiewicz, J., Greve, H.R., and Tsai, W. 2004. "Taking Stock of Networks and Organizations: A Multilevel Perspective," *Academy of Management Journal* (47:6), December 2004, pp 795-817.

Brocklehurst, M. 2001. "Power, Identity and New Technology Homework: Implications for 'New Forms' of Organizing," *Organization Studies* (22:3), pp 445-466.

Business Week Staff. 2007. "Ten Likely Events In 2008" *Business Week Online.* Retrieved 01 March 2008 from http://www.businessweek.com/bwdaily/dnflash/content/dec2007/

Carr, N. 2008. *The Big Switch* W.W. Norton & Company, Inc., New York.

Castells, M. 2000. *The Rise of the Network Society*, (2nd ed.) Malden, MA: Blackwell Publishers.

CIO.com Staff. 2007. "2007 To 2027: The Shape of Things To Come in I.T.," *Reseller News Online*. Retrieved 10 February 2008 from http://reseller.co.nz/reseller.nsf/feat/C342403C8D98C509CC2573670007935D

Cone, E. 2007. "Social Networks at Work Promise Bottom Line Results," *CIO Insight magazine*. Retrieved 01 March 2008 from http://www.cioinsight.com/article2/0,1540,2192575,00.asp

Cook, N., and Tapscott, D. 2008. *Enterprise 2.0: How Social Software Will Change the Future of Work.* Ashgate Publishing.

Davis, P.K, and Wainfan, L. 2004. *Challenges in Virtual Collaboration.* Santa Monica, CA, RAND Corporation.

Edwards, A., Wilson, J. 2004. *Implementing Virtual Teams.* Gower Publishing. Portland, OR: Gower Publishing.

Evans-Correia, K. 2007. "Facebook's professional potential evolves" *CIO Magazine,* Retrieved 06 January 2008 from http://searchcio.techtarget.com

Evans, V. 2007. "Social software: what it is and how it impacts individuals and organizations" Retrieved 10 January 2008 from http://www.masternewmedia.org/news/2007/05/17social_software_what_it_is.htm

Feeley, T.J., and Barnett, G.A. 1997. "Predicting employee turnover from communication networks" *Human Communication Research* (23:3), pp 370-387.

Florida, R. 2004. *Cities and the Creative Class.* Hoboken, NJ: Routledge.

Foucault, M. 1977. *Discipline and Punish: The Birth of the Prison.* Camberwell, VIC: Penguin Books.

Grossman, L. 2006. "You ? Yes, You ? Are TIME's Person of the Year," in: *TIME magazine online*. Retrieved 10 February 2008 from http://www.time.com/time/magazine/article/0,9171,1570810,00.html

Guba, E., and Lincoln, Y. 1994. "Competing Paradigms in Qualitative Research," in: *Handbook of Qualitative Research*, N. Denzin and Y. Lincoln (eds.), London: SAGE Publications.

Hardy, C., Lawrence, T.B., and Grant, D. 2005. "Discourse and Collaboration: The role of conversations and collective identity," *Academy of Management Review* (30:1) pp 58-77.

Holliday, A. 2002. *Doing and Writing Qualitative Research.* London: SAGE Publications.

Johansson, F. 2006. *The Medici Effect: What Elephants and Epidemics Can Teach Us About Innovation.* Boston, MA: Harvard Business School Press.

Klobas, J. 2006. *Wikis: Tools for Information Work and Collaboration* Oxford: Chandos.

Krackhardt, D., and Stern, R.N. 1988. "Informal networks and organizational crises: An experimental simulation.," *Social Psychology Quarterly,* (51:2) pp 123-140.

Lipsman, A. 2006. "ComScore Press Release," Retrieved 15 February 2008 from http://www.comscore.com/press/release.asp?press=1019

Lurey, J., Raisinghani, M. 2001. "An empirical study of best practices in virtual teams," *Information & Management* (38:8), Oct 2001, p 22.

McGillicudy, S. 2007. "Facebook, MySpace tolerated by businesses survey says" *CIO magazine online*. Retrieved 01 May 2008 from http://searchcio.techtarget.com/originalContent/0,289142,sid19_gcil275236,00

McKinsey Quarterly. 2007a. "Competitive Advantage From Bigger Interactions" Retrieved 01 February 2008 from http://www.mckinseyquarterly.com/Information_Technology

McKinsey Quarterly. 2007b. "How Businesses Are Using Web 2.0: A McKinsey Global Survey" Retrieved 11 January 2008 from http://www.mckinseyquarterly.com/Information_Technology

Menzel, C. 2007. *Web 2.0 as Approach for Enterprise Information Technology.* VDM Verlag Dr. Mueller E.K.

Morgan, G. 2006. *Images of Organization*, (2nd ed.) Thousand Oaks, CA: SAGE Publications,.

Murray, J. 2006. "Poor Comms Management harms virtual teams," *IT week UK*. Retrieved 18 March 2008 from http://www.itweek.co.uk/itweek/news/2164621/poor-comms-management-harms

Newman, A., and Thomas, J. 2008. *Enterprise 2.0 Implementation* McGraw-Hill Osborne Media.

Nonaka, I., and Takeuchi, H. 1996. "A theory of organizational knowledge creation," *International Journal of Technology Management* (11:7) pp 833-845.

Nutt, P.C. 2004. "Expanding the Search for Alternatives during Strategic Decision-Making," *Academy of Management Executive* (18:4), November 2004, pp 13-28.

OECD. 2008. "Participative Web and User-created Content: Web 2.0, Wikis and Social Networking." Organization for Economic Co-operation and Development.

Porter, M. 1980. *Competitive Strategy.* New York: Free Press.

Rosenbush, S. 2006. "How LinkedIn Broke Through," *BusinessWeek.com*. Retrieved 14 February 2008 from http://www.businessweek.com/technology/content/apr2006/tc20060410_185842.html

Rubin, H.J., and Rubin, I.S. 2005. *Qualitative Interviewing: The Art of Hearing Data*, Thousand Oaks, SAGE.

Sayer, K. 1998. "Denying the Technology: Middle Management Resistance in Business Process Re-engineering," *Journal of Information Technology* (13) pp 247-257.

Sayer, K., and Harvey, L. 1997. *The Panopticon and the Rhetoric of Empowerment in Business Process Engineering*. Retrieved 01 March 2008 from http://www-staff.it.uts.edu.au/~jim/bpt/s97l9.html

Sayer, P. 2007. "Video conferencing: you need an enterprise-wide strategy," Retrieved 15 January 2008 from http://www.forrester.com/Research/Document/Excerpt/0,721143071,00.html

Tabrizi, B. 2007. *Becoming a Real-Time Enterprise*. Sydney, Australia: McGraw-Hill.

Tapscott, D., Williams, A. 2006. *Wikinomics: How Mass Collaboration Changes Everything.* New York, NY: Portfolio.

Taylor, H., Fieldman, G., and Altman, Y. 2008a. "E-mail at Work: A Cause for Concern?" *Journal of Organisational Transformation and Social Change* (5:2), pp 159-173.

Taylor, K.C., and Chyung, S.Y. 2008b. "Would You Adopt Second Life as a Training and Development Tool?," *Performance Improvement* (47:8), September 2008, pp 17-25.

Timson, L. 2008. "Employers block Facebook at their peril," *ITWire Online*. Retrieved 10 February 2008 from http://www.itwire.com/content/view/17690/50/

Tynan, D. 2007. "As applications blossom, Facebook is open for business," *'Wired magazine'*. Retrieved 14 February 2008 from http://www.wired.com/techbiz/startups/news/2007/07/facebook_platform

Valdes, R. 2007. "LinkedIn Enters Increasingly Crowded Social Platform Arena," in: *Gartner*. Retrieved 08 February 2008.

Wasserman, S., and Faust, K. 1994. *Social Network Analysis: Methods and Applications. New York, NY:* Cambridge University Press.

Watts, D. 2004. *Six Degrees: The Science of a Connected Age.* New York, NY: W.W. Norton & Company.

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